IN THE CLAIMS:

Please cancel claims 4, 11, and 18-25.
Please amend the claims as follows:

1. (Currently Amended) A downhole pumping apparatus, comprising:

a wellbore having well fluids received therein from a formation into which said wellbore extends, said well fluids having a natural height within said wellbore and an interface between said well fluids and a second, lower density fluid, at a location spaced from a terminus of said wellbore;

~~a pump locatable within said wellbore and positioned intermediate said terminus and said interface~~;

~~a controller locatable at the surface of the well and operatively attached to the pump; and~~

a cooling zone, for cooling ~~the~~ said well fluids located within said well, said cooling zone having a saturated liquid in said well fluids, wherein vapor evolves from said liquid in said cooling zone as said liquid enters a lower pressure region of said cooling zone; and

~~wherein the~~ a pump ~~is~~ positioned above ~~the~~ said cooling zone in that portion of ~~the~~ said well fluids that is cooled in ~~the~~ said wellbore.

2. (Previously Presented) The downhole pumping apparatus of claim 1, wherein said cooling zone is located intermediate said pump and said terminus.

3. (Previously Presented) The downhole pumping apparatus of claim 2, wherein said cooling zone further includes a pressure gradient in said well fluid.

4. Cancelled.

5. (Currently Amended) The downhole pumping apparatus of claim [4] 1, wherein said evolving vapor cools the well fluid.

6. (Original) The downhole pumping apparatus of claim 5, wherein said wellbore includes a footed wellbore having a section thereof having a generally horizontal component and a span extending between a lower surface of said wellbore and an upper portion of said wellbore;

said pump is positioned at the lower surface of said wellbore and a space is provided between said pump and said upper surface of said wellbore; and

said vaporizing gas naturally rises in said wellbore and through said space.

7. (Previously Presented) The downhole pumping apparatus of claim 6, wherein said pump is a progressing cavity pump including a stator therein, said stator constructed at least partially of rubber.

8. (Original) The downhole pumping apparatus of claim 7, wherein said pump includes a rotor received within said stator and said rotor is rotatably driven by a rod extending down said wellbore from a drive mechanism located adjacent said wellhead.

9. (Previously Presented) The downhole pumping apparatus of claim 8, further including:

a pressure sensor located to detect the pressure adjacent said pump; and

the controller operatively coupled to said pressure sensor and said drive rod, to control the rotation of said drive rod in response to the pressure at said pump.

10. (Currently Amended) A method of pumping well fluids from a wellbore, comprising:

dissolving an additive material in the well fluids;

vaporizing at least a portion of the additive material, thereby forming ~~providing~~ a cooling zone in a tubular in the wellbore;

cooling at least a portion of the ~~fluid~~ well fluids in the tubular; and

positioning a pump above the cooling zone in said tubular in that portion of the ~~fluid~~ well fluids that ~~is~~ are cooled in the wellbore.

11. Cancelled.

12. (Currently Amended) The method of claim 11, wherein the ~~second material is~~ additive material comprises steam.

13. (Original) The method of claim 12, wherein the steam vapor evolves in the cooling zone, and the evolution cools the well fluid in the bore at and adjacent to the cooling zone.

14. (Original) The method of claim 13, wherein the pump is a progressive cavity pump having components therein having low resistance to temperature-based breakdown.

15. (Original) The method of claim 13, wherein the wellbore includes a footed portion having an upper surface and a lower surface separated by a wellbore span;

the pump has a width smaller than the span; and

the pump is positioned in the footed portion of the borehole to provide a gap between the pump and the borehole upper surface.

16. (Original) The method of claim 15, wherein the steam, upon vaporization thereof, forms bubbles in the well fluid in the footed bore; and,

the bubbles pass in the well fluid in the direction of the well head through the gap between the pump and the upper surface of the footed wellbore.

17. (Original) The method of claim 10, further including the steps of;

establishing a pressure range for the operation of the pump;

monitoring the pressure present at the pump;

directing the pumping rate of the pump in response to the pressure at the pump.

18. - 25. Cancelled.

26. (Previously Presented) The downhole pumping apparatus of claim 1, wherein said pump is an electric submersible pump.

27. (Previously Presented) The method of claim 10, wherein the pump is an electric submersible pump having components therein having low resistance to temperature-based breakdown.

28. Cancelled.

29. Cancelled.

Please add the following new claims:

30. (New) The apparatus of claim 1, further comprising a controller locatable at the surface of the well and operatively attached to the pump.

31. (New) A wellbore, comprising;
a well fluid;
an additive material disposed in the well fluid;
a cooling zone adapted to vaporize at least a portion of the additive material; and
a pump positioned above the cooling zone.

32. (New) The wellbore of claim 31, wherein the wellbore comprises:
a generally vertical section extending from a well head location; and
a footed wellbore section extending from the vertical section and having a substantial horizontal component.

33. (New) The wellbore of claim 32, wherein the pump is positioned in a transition section between the vertical section and the footed wellbore section.

34. (New) The wellbore of claim 31, further comprising a controller to control the pump.

35. (New) The wellbore of claim 31, wherein the additive material is steam.

36. (New) The wellbore of claim 31, further including a drive rod extending within the wellbore and connected to the pump to mechanically drive the pump.

37. (New) The wellbore of claim 31, further including a tubular extending inwardly of the wellbore and connected to the fluid outlet of the pump.

38. (New) The wellbore of claim 31, wherein the pump includes a pressure sensor.

39. (New) The wellbore of claim 31, wherein the pump is operated to maintain a pressure within the cooling zone sufficient to vaporize the additive material.

40. (New) A method of recovering formation fluids, comprising:
mixing an additive material in the formation fluids;
decreasing a viscosity of the formation fluids;
collecting the formation fluids in a wellbore;
vaporizing the additive material, thereby cooling the formation fluids;
positioning a pump in the cooled formation fluids; and
recovering the cooled formation fluids.

41. (New) The method of claim 40, further comprising injecting the additive material from an adjacent wellbore.

42. (New) The method of claim 40, wherein the additive material comprises steam.

43. (New) The method of claim 40, further comprising operating the pump such that the pressure adjacent a pressure adjacent the pump is sufficient to vaporize the additive material.

44. (New) The method of claim 40, wherein decreasing the viscosity comprises heating the formation fluids.

45. (New) The method of claim 40, wherein the formation fluids enter the wellbore at a temperature between about 300°F to about 500°F.

46. (New) The method of claim 40, wherein the formation fluids enter the pump at a temperature below 280°F.

47. (New) The method of claim 40, wherein a pressure at the pump inlet is between about 20 psig to about 35 psig.

48. (New) A method of recovering formation fluids from a formation, comprising:

injecting steam from a first wellbore into the formation;

urging the formation fluids to flow into a second wellbore;

maintaining a pressure in the formation such that at least a portion of the steam enters the second wellbore in the form of water;

providing a cooling zone in the second wellbore, wherein a pressure in the cooling zone is sufficient to vaporize the water;

positioning a pump in the cooling zone; and

pumping the formation fluids along the second wellbore.

49. (New) The method of claim 49, further comprising operating the pump to maintain the pressure in the cooling zone sufficient to vaporize the water.